

Att. Docket No. REG 471-PCT-US
USSN 09/204,555
Amendment in Response to October 31, 2001
Office Action and Petition for Three Month
Extension of Time

The Amendments

No new matter has been added to this application by the present amendments.

The amendments to claims are supported throughout the application and especially at page 11, lines 3 - 15.

Applicants submit herewith as Exhibit 1: Marked-Up Versions of claims pages 28, 29, and 30.

Rejection under 35 USC § 101

Examiner has rejected claims 1 – 6 as being an improper process claim. Applicants have now amended such claims to obviate the rejection.

Rejection under 35 USC § 112

The Examiner rejected Claims 1 – 6 and 12 – 18 under 35 USC § 112 as being indefinite. Specifically, Examiner points out that it is unclear what the enhancement is being measured against. Applicants have amended such claims so as not to make reference to enhancement and thereby obviate the rejection.

Examiner has also rejected Claims 6, 12 and 18 for an improper recitation of TrkB-IgG. Applicants have amended these claims as per the Examiner's suggestion.

Examiner rejected claims 1 – 6 for not setting forth any steps involved in the method. Applicants have amended these claims to obviate the rejection.

Based on the amendments and the above remarks, applicants respectfully request reconsideration and withdrawal of the rejections.

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Rejection under 35 USC § 102(b)

Claims 7 -12 stand rejected under 35 USC § 102(b) as being anticipated by Zheng et al. Applicants respectfully disagree with Examiner's rejection. It is true, as Examiner points out, the reference teaches the administration of neurotrophins, including NGF, BDNF, NT-3 and NT-4/5 with TrkB-IgG, but the paper teaches away from applicants' invention. On page 5081, where the paper discusses the coadministration of the neurotrophins with the TrkB-IgG and TrkC-IgG, the results reported that the "TrkB-IgG fusion protein completely inhibited the survival-promoting effects of NT-4/5." Thus this paper teaches away from applicants invention wherein the delivery of the growth factor is enhanced rather than inhibited by the presence of the soluble form of the receptor, and therefore the rejection is not appropriate. Based on the above remarks, applicants respectfully request reconsideration and withdrawal of the rejections.

Rejection under 35 USC § 103

Claims 1 – 3, 7 – 9, and 13 – 16 have been rejected as being unpatentable over Prisell et al. in view of Sable et al. Applicants respectfully disagree with Examiner's rejection. The compositions of Prisell comprise carrier materials such as hyaluronic acid as a cross-linked matrix with the receptor (see page 2, lines 18 – 20 to item I on page 2, the examples at page 3 and claim 2). Such compositions would not be brain-compatible and thus there could be no motivation to combine with the delivery system of Sable for treatment of neural disorders. Applicants claims are limited to intracerebral, extracerebral, intraparenchymal, intracerebraventricular or intrathecal delivery. The compositions of Prisell are not compatible for such delivery. Applicants therefore believe that such rejection is inappropriate given these facts. Based on the above remarks, applicants respectfully request reconsideration and withdrawal of the rejections.

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Accordingly it is submitted that the subject matter claimed fully meets the requirements for patentability and the application is therefore in order for acceptance. An early notification of its progress to issuance is earnestly solicited.

No additional fee is deemed necessary. However, if any additional fee is required, the Commissioner is hereby authorized to charge any such fee to Deposit Account No. 18-0650.

Respectfully submitted,



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CLAIMS

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(AMENDED)

1. Use of a soluble form of a receptor for a growth factor for the delivery of said growth factor comprising the step of in the manufacture of a medicament for enhancing the coadministration of a growth factor with said soluble form of the growth factor receptor such that said growth factor and said soluble form of the growth factor receptor are delivered intracerebrally, intracerebraventricular or intrathecal delivery of said growth factor by coadministration of said growth factor intracerebrally, intracerebraventricular or intrathecally, with said soluble form of the growth factor receptor.

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2. Use according to claim 1 wherein the growth factor is a neurotrophin.
3. Use according to claim 1 wherein the growth factor is Nerve Growth Factor (NGF), Brain-Derived Neurotrophic Factor (BDNF), Neurotrophin 3 (NT-3), Neurotrophin- 4/5 (NT-4/5), Ciliary Neurotrophic Factor (CNTF) or Glial-Derived Neurotrophic Factor (GDNF).
4. Use according to any one of the preceding claims wherein said soluble receptor is in the form of a receptorbody.

5. Use according to any one of the preceding claims wherein said growth factor is BDNF or NT-3 and the soluble receptor is the extracellular domain of TrkB or TrkC.

(Amended)

6. Use according to claim 5 wherein said growth factor is BDNF and the soluble receptor is a TrkB^{IGG} receptorbody.
7. A pharmaceutical composition comprising a growth factor; a soluble form of a receptor for said growth factor; and a pharmaceutically acceptable vehicle.
8. A pharmaceutical composition according to claim 7 wherein the growth factor is a neurotrophin.
9. A pharmaceutical composition according to claim 7 wherein the growth factor is Nerve Growth Factor (NGF), Brain-

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Derived Neurotrophic Factor (BDNF), Neurotrophin-3 (NT-3), Neurotrophin-4/5 (NT-4/5), Ciliary Neurotrophic Factor (CNTF) or Glial-Derived Neurotrophic Factor (GDNF).

10. A pharmaceutical composition according to any one of claims 7 to 9 wherein said soluble receptor is in the form of a receptorbody.
11. A pharmaceutical composition according to any one of claims 7 to 10 said growth factor is BDNF or NT-3 and the soluble receptor is the extracellular domain of TrkB or TrkC.
- (Amended)
12. A pharmaceutical composition according to claim 11 wherein said growth factor is BDNF and the soluble receptor is a TrkB: IgG receptorbody.
13. A method for enhancing the intracerebral, extracerebral, intraparenchymal, intracerebraventricular or intrathecal delivery of a growth factor by coadministration of said growth factor with said soluble form of the growth factor receptor.
14. A method according to claim 13 wherein the growth factor is a neurotrophin.
15. A method according to claim 13 wherein the growth factor is Nerve Growth Factor (NGF), Brain-Derived Neurotrophic Factor (BDNF), Neurotrophin-3 (NT-3), Neurotrophin-4/5 (NT-4/5), Ciliary Neurotrophic Factor (CNTF) or Glial-Derived Neurotrophic Factor (GDNF).
16. A method according to any one of claims 13 to 15 wherein said soluble receptor is in the form of a receptorbody.
17. A method according to claim 13 to 16 said growth factor

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is BDNF or NT-3 and the soluble receptor is the extracellular domain of TrkB or TrkC.

18. A method according to claim 17 wherein said growth factor is BDNF and the soluble receptor is a TrkB IgG receptorbody.

19. Use according to claim 1 substantially as hereinbefore described.

20. A pharmaceutical composition according to claim 7 substantially as hereinbefore described.

21. A method according to claim 13 substantially as hereinbefore described.